

Plumeless thistle

Colorado Dept. of
Agriculture,
Conservation
Services Division
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Key ID Points

1. Flower heads cluster 2-5 and are purple to dark red in color.
2. Leaves are alternate, stalk-less and hairy underneath.

Plumeless thistle Identification and Management



Identification and Impacts

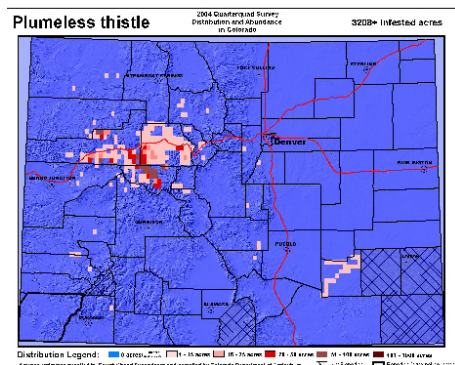
Plumeless thistle (*Carduus acanthoides*) is a winter annual or biennial that is native to Europe and Asia. Plumeless thistle rosettes have wavy leaves with yellow spines along the white-colored leaf margins. The stems are covered with leaf-like, winged spines that extend up to the flowering heads. The flower heads, in clusters of 2 to 5, are alone at the end of the branches. They are purple to dark red in color and are 1/2 to 1 inch in diameter. Leaves are alternate, stalk-less, hairy underneath and blend into the stem. Mature plants can grow taller than 5 feet and can produce upwards of 9,000 seeds.

Habitats for Plumeless thistle include pastures, fields, disturbed lands, logged-over areas, river valleys, along roadsides and in native grasslands. Plumeless thistle out competes native species and forage crops. It is one of the most aggressive thistles, due to its high seed production. Plumeless thistle is unpalatable to livestock and it may accumulate nitrates.

Plants over winter and grow from seeds and rosettes. The seed viability for Plumeless thistle is unknown. The site must be monitored for at least 10 years after the last flowering adult plants have been eliminated and treatments repeated when necessary.

The key to effective control of Plumeless thistle is very similar to Musk thistle. Preventing Plumeless thistle seed production and planting desirable grasses and forbs to out compete plumeless thistle is effective. An integrated weed management approach is an effective tool when dealing with plumeless thistle; using herbicide, biological and cultural control methods. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Plumeless thistle is designated as a "List B" species in the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local infestations. For more information visit www.colorado.gov/ag/csd and click on the Noxious Weed Management Program. Or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.



Photos © Map above: Crystal Andrews, Colorado Department of Agriculture; All other photos: Kelly Uhing, Colorado Department of Agriculture.

Carduus acanthoides

**CULTURAL**

Establishment of selected grasses can be an effective cultural control of Musk thistle. Contact your local Natural Resources Conservation Service for seed mix recommendations. Maintain healthy pastures and prevent bare spots caused by overgrazing. Bareground is prime habitat for weed invasions.

**BIOLOGICAL**

Biological control insects, such as the seed head weevil and the crown weevil are effective on large infestations. When used together, these insects provide fair to good control. These insects have been known to threaten native thistle populations. Contact the Insectary of Colorado Department of Agriculture to get complete information at 970-464-7916. Or visit www.colorado.gov/ag/csd.

**MECHANICAL**

Any mechanical or physical method that severs the root below the soil surface will kill Plumeless thistle. Mowing or chopping is most effective when Plumeless thistle plants are at full bloom. Be sure to properly dispose of the flowering cut plants since seeds can mature and become viable after the plant has been cut down.

Integrated Weed Management:

The key to managing Plumeless thistle is to prevent seed production. Dense Plumeless thistle stands can be treated by spot use of herbicide programs. Due to the unknown seed viability of plumeless thistle, monitoring up to 10 years, and repeating control methods may need to occur for many years to completely eliminate an infestation.

Plumeless thistle

HERBICIDES

NOTE: The following are recommendations for herbicides that can be applied to range and pasturelands. Rates are approximate and based on equipment with an output of 30 gal/acre. Please read label for exact rates. **Always read, understand, and follow the label directions. The herbicide label is the LAW!**

HERBICIDE	RATE	APPLICATION TIMING
Aminopyralid (Milestone)	5 fl oz product/acre	Apply in spring to early summer rosette to bolting growth stages or in the fall.
Clopyralid (Transline)	0.67 pint product/acre	Apply when plants are in the rosette growth stage. (Spring or Fall rosettes)
Clopyralid + 2,4-D (Curtail)	2 quarts product/acre	Apply when plants are in the rosette growth stage. (Spring or Fall rosettes)
Picloram (Tordon - *restricted use herbicide*)	1-2 pints product/acre	Apply when plants are in the rosette growth stage. (Spring or Fall rosettes)
2, 4-D	1 quart/acre	Apply when plants are in the rosette growth stage. (Spring or Fall rosettes)

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